

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 5. (Cancelled)

6. (Currently Amended) An installation for refrigeration comprising an endothermic component comprised of a device (EC) and an exothermic component ~~consisting of comprising~~ a reactor (1) and a reactor (2), wherein:

[[-]] the reactors (1) and (2) are in thermal contact so that the reactor (1) constitutes a first active thermal mass for the reactor (2) and the reactor (2) constitutes a second active thermal mass for the reactor (1) each of them constitutes an active thermal mass for the other;

[[-]] the reactors (1) and (2) are selectively communicatable with the device (EC);
the reactor (1) and the reactor (2) are provided with a heater and a heat extractor; ~~and~~

[[-]] at the start of a cycle[[:]] [[-]] ~~the reactors~~ reactor (1) ~~and (2) contain~~ comprises a sorbent S1 and the reactor (2) comprises a sorbent S2, ~~respectively, the sorbent S1 being capable of participating in a first reversible sorption involving a gas G and the sorbent S2 being capable of participating in a second reversible sorption involving~~ [[a]] the gas G, the a first equilibrium temperature of the first reversible sorption in the reactor (1) being higher than ~~the a second~~ equilibrium temperature of the second reversible sorption in the reactor (2) at a given pressure; and

[[-]] the device (EC) is an evaporator, the evaporator being comprised of a cylinder which is closed at its two ends and has a circular cross section, the circular cross section including, in its upper part, a concave circular arc corresponding to the cross section of an ice tray, wherein the evaporator further comprises:

i) hollow fins comprising a solid/liquid phase change material; and

ii) a tube, connected to a pipe transferring the gas G between the evaporator and the reactor (2), extending into the cylinder of the evaporator via a bore made in one of the ends of the cylinder, the tube being placed directly beneath a wall of the ice tray, and the gas G in the form of a boiling liquid being placed in the bottom of the evaporator; contains a compound G capable of undergoing a liquid/gas phase change or an SEC+G sorbent rich in gas G capable of participating in a reversible sorption, the equilibrium temperature of which is below the equilibrium temperature of the reversible sorption in the reactor (2).

7. (Previously Presented) The installation as claimed in claim 6, wherein the device (EC) is in direct thermal contact with a reservoir containing water.

8. (Currently Amended) The installation as claimed in claim 6, wherein the ~~device (EC) furthermore contains a liquid/solid~~ solid/liquid phase change material[[,]] has a the phase change temperature ~~of which is below the~~ a refrigeration temperature of the installation.

9. (Cancelled)

10. (Original) The installation as claimed in claim 6, wherein the reactor (1) is placed inside the reactor (2).

11. (Currently Amended) The installation as claimed in claim 10, wherein the reactors (1) and (2) are concentric, ~~the reactor (1) being placed inside the reactor (2).~~

12. (Cancelled)

13. (Currently Amended) The installation as claimed in claim 8, wherein the difference between the phase change temperature of the solid/liquid phase change material and the refrigeration temperature is from 1°C to 10°C .

14. (New) A method of refrigeration using the installation of claim 6, further comprising three reversible phenomena involving the gas G in the device (EC), the reactor (1) and the reactor (2) having respective equilibrium temperatures $T_{E(EC)}$, $T_{E(1)}$ and $T_{E(2)}$ at the given pressure such that $T_{E(EC)} < T_{E(2)} < T_{E(1)}$, wherein, starting from an initial state in which the device (EC), the reactor (1) and the reactor (2) are at ambient temperature and at a same pressure:

(a) in a first step, isolating the reactor (1), carrying out a first exothermic synthesis in the reactor (2) by bringing the device (EC) and the reactor (2) into communication, and absorbing heat produced by the first exothermic synthesis with the reactor (1);

(b) in a second step, isolating the reactor (2), carrying out a second exothermic synthesis in the reactor (1) by bringing the device (EC) and the reactor (1) into communication, and absorbing heat produced by the second exothermic synthesis with the reactor (2); and

(c) in a third step, bringing the device (EC), the reactor (1), and the reactor (2) into communication, regenerating the installation by carrying out exothermic decomposition steps in the reactor (1) and the reactor (2) by supplying thermal energy to the reactor (1), and allowing the installation to return to the ambient temperature.

15. (New) The method as claimed in claim 14, further comprising:

in the initial state, isolating the device (EC), the reactor (1) and the reactor (2) from one another and placing the device (EC), the reactor (1) and the reactor (2) at the ambient temperature, wherein the reactor (1) comprises the sorbent S1 in a state lean in the gas G, the reactor (2) comprises the sorbent S2 in a state lean in the gas G, and the device (EC) comprises the gas G in a liquid state or a sorbent in a state rich in the gas G;

during the first step, causing refrigeration in the device (EC) by bringing the device (EC) and the reactor (2) into communication, wherein the refrigeration occurs at an equilibrium temperature in the device (EC) corresponding to the pressure in a first assembly formed by the reactor (2) and the device (EC);

during the second step, causing refrigeration in the device (EC) by bringing the device (EC) and the reactor (1) into communication, wherein the refrigeration occurs at the equilibrium temperature in the device (EC) corresponding to the pressure in a second assembly formed by the reactor (1) and the device (EC); and

during the third step, causing synthesis in the device (EC) and decomposition in the reactor (2) by bringing the device (EC), the reactor (1) and the reactor (2) into communication, and causing decomposition in the reactor (1) by applying thermal energy to the reactor (1).

16. (New) The method as claimed in claim 14, wherein the reversible phenomena in the reactors (1) and (2) are selected from the group consisting of reversible chemical reactions between the gas G and a solid, adsorptions of the gas G on a solid, and absorptions of the gas G by a liquid.

17. (New) The method as claimed in claim 14, wherein the reversible phenomenon in the device (EC) is a liquid/gas phase change.

18. (New) The method as claimed in claim 14, wherein the reversible phenomenon in the device (EC) is a sorption selected from the group consisting of reversible chemical reactions between the gas G and a solid, adsorptions of the gas G on a solid, and absorptions of the gas G by a liquid.